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FORMULTO 1449						Docket Number:					
						4015-5133 10/720,492					
INFORMATION DISCLOSURE CITATION					Applicant:						
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	37	CF	R §1.97 & 1.98			Filing Date: 11/24/03	Filing Date: Group: 11/24/03				
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<u>/KN</u>	(IR)	<u>LA</u>	6,363,104	2002	Bottomley	······································	<u></u>	<u> </u>	Щ		
	ļ	<u>IB</u>		12000	Higashi et al.			<u> </u>	<u> </u>		
	7	ĪĈ		11999	Stahle		ļ	<u> </u>	<u> </u>	·	
	/	듄		11998	Kanterakis et	al.		<u> </u>	<u> </u>		
/KM	B/	<u> E</u>	<u> 5,506,861</u> 	1996	Bottomley				 		
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				FOR	EIGN PATENT	DOCUMENTS					
			•	<u> </u>					Trans	slation	
/KMB/		<u> </u>	Patent No.	Date	Name		Class	Subcl			
		<u> </u>	WO 00/72459	2000) Aazhang, Be	ehnaam	i	Ĺ	Ĺ	Ĭ.	
		<u> </u>	<u> </u>								
	MB/	ΙA	Pub. No.: US	2002/01	OTHER DOCL	JMENTS (including a		,		•	
	1	I for Providing Blink Adaptive Estimation and I				n and Reception," He	eikkila.				
		В	D.M. Novakov	ić and N	1. L. Dukić, "Mu	ltistage multiuser det	ector for	DS-CD	MA		
			multipath fadir	ng chanr	nel," <i>Electronics</i>	Letters, vol. 34, no.	11, 28 M	ay 199	8,		
			<u>l pp. 1068-1070</u>).				Ť			
		C	Z. Xie, R.T. St	nort, and	l C.K. Rushforth	n, "A family of subopt	imum de	tectors	for		
			coherent multi	user cor	mmunications,"	IEEE J. Sel. Areas C	ommun.,	vol. 8,	, pp.		
		ח	[683-690, May 1990. S. Tantikovit, A.U.H. Sheikh and M.Z. Wang, "Combining schemes in rake								
			↑ S. Tantikovit, A.O.H. Sheikh and M.Z. Wang, Combining schemes in rake ↓ receiver for low spreading factor long-code WCDMA systems," <i>Electronic Letters</i> ,							ers.	
 vol. 36, no. 22, 26 Oct. 2000, pp. 1872-1874. E S. Tantikovit and M.Z. Wang, "An optimum combining and concatenated of the for dual-antenna mobile terminals in UMTS," IEEE Commun. Letters, vol. 1872-1874. 								•			
						nated-F	RAK	E			
						s, vol.	6,				
		_	pp. 231-233, J			<u></u>					
		F.	C.B. Papadias	and H.	Huang, "Linear	space-time multiuse	r detectio	n for n	nultip	ath	
I	, I		i channeis, <i>icc</i> I	E J. Se	i. Areas Commi	<i>un.</i> , vol. 19, pp. 254-2	265, Feb.	2001.			
$\neg \uparrow$		G	A. Klein, G.K.	Kaleh, a	ind P.W. Baier.	"Zero forcing and mi	nimum m	ean- s	<u>qua</u>		
- 1	j		error equalizat	ion for n	nultiuser detect	ion in code-division n	nultiple-a	ccess	400.		
	Ĭ		channels," IEE	E Trans	s. Veh. Technol.	vol. 45, pp. 276-287	7, May 19	96.			
	/ !	Н	X. Wang and I	H.V. Pod	or, "Space-time	multiuser detection in 47, pp. 2356-2374,	n multipa	h CDN	ΛA		
/KN	/IR/ I		M Juntti "Perl	formano	e analysis of lin	ear multisensor multi	ucor ro-	i) 40 == 4			
WW	ו וטוי ו	•	CDMA in fadin	a chann	els <i>" IFFF I S</i>	e <i>l Area Commun</i> , vol	18 nn	#IVE[\$ 1221.4	220 U		
	i		July 2000.	3 MIGH	olo, reee o. O	a Alea Oominun, VOI	. 10, pp.	1221-1	229	•	
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IVADI	Ī	L'Extended MMSE receiver for multisuer interference rejection in multipath DS-					
/KMB/	Ĭ	CDMA channels," in Proc. IEEE Veh. Technol. Conf., Amsterdam, The					
- 1	i	Netherlands, Sept. 19-22, 1999, pp. 1840-1844.					
	iк	W. L. Myrick, S. Sud, J.S. Goldstein, and M.D. Zoltowski, "MMSE correlator based					
- 1	``	RAKE receiver for DS-CDMA," in <i>Proc. Milcom 2001</i> , pp. 1418-1422.					
- 1	i						
+	 	S.S.H. Wijayasuriya, J.P. McGeehan, and G.H. Norton, "Rake decorrelating					
- 1	-	receiver for DS-CDMA mobile radio networks," <i>Electronics Letters</i> , vol. 29, no. 4,					
1	ţ	pp. 395-396, 18 February 1993.					
	LNA	S.S.H. Wijayasuriya, J.P. McGeehan, and G.H. Norton, "Rake decorrelation as					
1	1 141						
1	ļ	I an alternative to rapid power control in DS-CDMA mobile radio," 43rd IEEE					
1	 	Vehicular Technology Conf., Secaucus, NJ, pp. 368-371, May 18-20, 1993.					
1	İıx	G. Bottomley, T. Ottoson, and YP. E. Wang, "A generalized RAKE receiver for					
1	İ	interference suppression," IEEE J. Sel. Areas Commun., vol. 18, pp. 1536-1545,					
	느	August, 2000.					
	ļΟ	M. Juntti, and B. Aazhang, "Finite memory-length linear multiuser detection for					
	ļ	asynchronous CDMA communications," IEEE Trans. Commun., vol. 45, pp. 611-					
	<u> </u>	622, May 1992.					
	ļΡ	Deng et al., "A Multistage Multi-Carrier CDMA Receiver with Enhanced Inter-					
	ļ	ference Suppression," 3rd IEEE Signal Processing Workshop on Signal					
	<u> </u>	Processing Advances in Wireless Communications, Taiwan, March 20-23, 2001.					
	Q	Sukvasant et al., "A new RAKE receiver structure for the forward-link of W-CDMA					
	l	systems," IEICE Transactions on Communications, vol. E85-B, no. 6, pp. 1218-22					
	<u> </u>	June 2002, ISSN 0916-8516.					
	IR	D.M. Novaković and M.L. Dukić, "Multistage multiuser detector for multipath fading					
	1	channel," European Transactions on Telecommunications, vol. 12, no. 6,					
<u>.</u>		pp. 471-8, Nov-Dec 2001, ISSN 1120-3862.					
	S	Irfan Ghauri and Kirk T.M. Slock, "Linear Receivers for the DS-CDMA Downlink					
	1 .	Exploiting Orthogonality of Spreading Sequences," Proc. 32nd Asilomar Conf. on					
		Signals, Systems 8c Computers, Pacific Grove, CA, Nov. 1998.					
	T	H. Hadinejad-Mahram and G. Alirezaei, "A Linear Receiver for WCDMA Downlink					
	ĺ.	Exploiting the Coloration of the Interference," 0-7803-7661-7/03/\$17.00@2003					
		IEEE					
	U	H. Huang and S. Schwartz, "A Comparative Analysis of Linear Multiuser Detectors					
1	ĺ.	for Fading Multipath Channels," presented at Globecom '94 conference, 1994					
	Ĺ	IEEE, pp. 11-15.					
	١V	S. Tantikovit and A. U. H. Sheikh, "Joint Multipath Diversity Combining and MLSE					
	i ı	Equalization (Rake-MLSE Receiver) for WCDMA Systems," presented at					
-M	i	VTC2000, 2000 IEEE, pp. 435-439.					
V	īw	J.G. Proakis, Digital Communications, 2nd edition, section 7.5.					
/KMB/	Х	E. Dahlman and M. Sawahashi, "13.3G Evolution and Future-Generation Air					
		Interface in Mobile Communications"					
EXAMINE	Κ.	/Kevin M Burd/ DATE CONSIDERED 03/29/2007					
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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation not in conformance and not considered, Include copy of this form with next communication to the applicant.



Sheet 1 of 1

FORM PTO-1449					Docket Number: Serial Number: 4015-5133 10/720,492					
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		116.4- 0 -4 -1.	<u> </u>		tation of a Downlin	-I. ODA	14 0	1		
		 C Kutz, G. et al: "Low Complexity Implementation of a Downlink CDMA Generalized Rake Receiver" VTC 2002-Fall. 2002 IEEE 56th. Vehicular Technology Conference Proceedings. Vancouver, Canada, Sept. 24-28, 2002, IEEE 							zea	
/KMB/	 									
	ĺ	Vehicular Technology Conference, New York, NY: IEEE, US, vol. 1 of 4, Conf. 56,								
	į	24 September 2002, pages 1357-1361, XP010608650 ISBN: 0-7803-7467-3.								
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